



Cotton Varieties
for
Oklahoma

Bulletin No. B-343 January, 1950

OKLAHOMA AGRICULTURAL EXPERIMENT STATION

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in cooperation with

BUREAU OF PLANT INDUSTRY, SOILS
AND AGRICULTURAL ENGINEERING

United States Department of Agriculture

These Varieties Are Best by Test

Results of cotton variety tests at Tipton, Lawton, Chickasha and Perkins from 1944 to 1948 show the following varieties best adapted to Oklahoma conditions:

<u>Western Oklahoma</u>	<u>Central Oklahoma</u>	<u>Eastern Oklahoma</u>
Mebane 6801	Stoneville 62	Stoneville 62
Lockett 140	Deltapine 15	Deltapine 15
*Lankart 57	Mebane 6801	
*Northern Star	Lockett 140	
**Stormproof No. 1	*Lankart 57	

* Lankart 57 and Northern Star are better adapted to tight upland than to bottom land soils.

** Stormproof No. 1 is recommended only for mechanical stripping.

THE COVER: A field of Stoneville 62 cotton at the Oklahoma Cotton Research Station, Chickasha. Stoneville 62 was developed by the Oklahoma Agricultural Experiment Station. Inset shows a close-up of this variety.

Cotton Varieties for Oklahoma

By I. M. PARROTT, N. M. GOBER Jr., and J. M. GREEN*

The variety of cotton planted is a major factor in the yield and quality of the crop harvested. Therefore the Oklahoma Agricultural Experiment Station each year tests promising varieties in different parts of the State. These tests provide a guide for farmers interested in the best possible yields and quality. They also give the Station's cotton breeders an opportunity to check the performance of promising new strains they have developed.

This bulletin summarizes results of tests made at Tipton, Lawton, Chickasha and Perkins for the five-year period 1944 to 1948.** Tipton and Lawton are representative of different soil types of Western Oklahoma. Chickasha is somewhat intermediate between Eastern and Western Oklahoma, and Perkins is the eastern most location from which data are available. Average data on varieties tested at these locations are presented in Tables 1 to 4, inclusive.

Varietal Comparisons

Mebane 140 is especially well adapted to Western Oklahoma. The highest yields at Tipton were made by strains of this variety. These strains also performed satisfactorily at Lawton and Chickasha, but apparently were not well adapted at Perkins.

Mebane 140 is a close fruiting variety of medium maturity. It has excellent fiber which usually is classed 28/ to 30/32 of an inch. Experience has shown this variety to be better than average in its storm-proof qualities.

One of the *Mebane 140* strains, *Mebane 6801*, was developed at the Oklahoma Agricultural Experiment Station. *Lockett 140* is another strain of the same variety; it is produced and sold by a seed company at Vernon, Texas.

(Varietal comparisons continued on Page 10.)

*Parrott is Superintendent, Oklahoma Cotton Research Station, Chickasha; and Gober is Cotton Laboratory Technician at Stillwater. The tests reported in this publication were conducted by Henry E. Dunlavy, Agronomist, and Agent, U.S.D.A. Dunlavy resigned June 15, 1949, and was succeeded by Green, who is responsible for the present arrangement of this publication.

** Results of the tests are reported in more detail in Okla. Agri. Exp. Sta. Tech. Bul. T-37, "Oklahoma Cotton Variety Tests, 1944 to 1948."

TIPTON

TABLE 1.—Average data obtained on 18 varieties of cotton tested two to five years at Tipton, Oklahoma, during the period 1944 through 1948.

Variety	Lbs. Lint per acre	Staple in 32's	Lint Percent		Grams per Boll	Pct. Picked 1st Pick.	Years Tested
			Picked	Pulled			
Mebane 6801-2-1	308	28	39.9	31.2	6.0	52.9	3
Lockett 140	296	29	39.6	30.7	5.3	53.7	5
CR-2	274	29	41.7	31.5	5.2	62.8	2
Deltapine 15	269	32	41.2	30.6	4.5	57.8	5*
Stormproof No. 1	264	30	37.4	28.6	5.2	52.6	2
Watson	263	30	37.6	28.7	6.6	44.6	5
Hi-Bred	260	26	41.1	32.6	5.1	64.5	5
CR-1	260	30	38.9	29.0	5.5	65.9	3
Stoneville 62-84	250	31	36.8	27.8	4.8	81.5	2
Half and Half	249	26	41.2	32.4	5.1	63.4	5
Stoneville 2B	249	32	35.8	27.6	5.4	62.2	5
Lankart 57	245	31	38.7	29.0	6.5	56.2	5
Northern Star	240	32	37.6	28.7	5.6	62.8	4
Paymaster	231	30	37.8	28.7	5.4	77.2	2
Delfos 9169	227	33	36.7	27.8	5.1	49.7	2
Dortch No. 1	219	31	34.8	25.9	6.3	60.2	2
Watson's New Rowden	209	31	34.7	25.8	6.0	63.2	3
Macha	202	29	34.1	25.9	4.9	56.9	4

* Data for 1944-46 were on Deltapine 14.

NOTE: Varieties printed in blackface type are recommended for the area represented by this test.

LAWTON

TABLE 2.—Average data obtained on 14 varieties of cotton tested two to five years at Lawton, Oklahoma, during the period 1944 through 1948.

Variety	Lbs. Lint per acre	Staple in 32's	Lint Percent		Grams per Boll	Pct. Picked 1st Pick.	Years Tested
			Picked	Pulled			
Lankart 57	270	31	40.1	30.3	6.7	65.9	5
Mebane 6801-2-1	270	28	40.5	31.5	5.7	69.7	3
Deltapine 15	265	32	41.3	31.3	4.7	73.8	5*
Northern Star	253	31	38.8	29.9	5.8	75.2	4
Lockett 140	252	28	40.2	31.8	5.4	80.0	3
CR-1	248	31	39.2	29.4	5.6	81.9	3
Stoneville 62-108	247	31	38.4	29.2	4.9	77.9	2
Half and Half	243	26	41.9	33.0	5.2	80.3	2
Watson	239	30	39.7	30.6	7.0	63.5	4
Hi-Bred	236	26	41.9	33.5	5.2	80.0	5
Stoneville 2B	227	32	37.0	28.6	5.3	69.9	5
Macha	225	28	37.6	29.1	4.9	67.4	2
Roldo Rowden	224	31	36.6	27.8	6.3	70.8	2
Watson's New Rowden	215	31	36.9	27.8	5.9	64.1	2

* Data for 1944-46 were for Deltapine 14.

NOTE: Varieties printed in blackface type are recommended for the area represented by this test.

CHICKASHA

TABLE 3.—Average data obtained on 24 varieties of cotton tested two to five years at Chickasha, Oklahoma, during the period 1944 through 1948.

Variety	Lbs. Lint per acre	Staple in 32's	Lint Percent		Grams per Boll	Pct. Picked 1st Pick.	Years Tested
			Picked	Pulled			
Empire	341	33	36.2	27.1	6.8	63.6	2
CR-1	333	31	38.1	28.2	6.8	72.8	4
Stormproof No. 1	331	29	38.3	29.1	5.6	63.4	3
Half and Half	327	28	40.3	31.5	6.0	72.6	3
Hi-Bred	326	27	40.9	32.3	5.9	72.5	5
CR-2	319	30	40.5	30.4	5.5	66.5	2
Lockett 140	314	29	38.8	30.3	5.8	73.7	5
Deltapine 15	312	32	40.6	29.7	4.8	60.0	5*
Stoneville 62-84	312	32	36.1	28.0	5.5	73.6	3
Stoneville 62-108	306	32	35.8	27.0	5.6	73.1	2
Paymaster	297	30	37.2	28.2	6.4	79.9	3
Mebane 6801-2-1	294	29	38.4	29.1	6.5	64.9	4
Watson	294	31	37.7	28.8	7.4	53.1	4
Northern Star	291	32	37.0	28.2	6.3	71.1	5
Watson's New Rowden	287	32	35.9	26.7	7.1	65.2	4
Delfos 9169	280	35	35.1	26.4	6.0	55.3	2
Stoneville 2B	271	32	34.8	26.6	5.9	64.4	5
Lankart 57	265	32	37.2	27.3	7.2	55.6	4
Acala 4-42	263	35	38.3	27.3	5.8	56.7	2
Rowden 41B	262	32	35.0	25.8	6.7	66.9	3
Roldo Rowden	262	32	36.1	26.7	7.3	70.4	2
Coker 100 wilt	260	35	34.9	26.1	5.6	60.0	2
Acala 1517 wilt	205	34	34.2	24.9	6.0	56.6	2
Coker Wilds	203	38	31.3	22.5	5.3	65.9	2

* Data for 1944-46 were for Deltapine 14.

NOTE: Varieties printed in blackface type are recommended for the area represented by this test.

PERKINS

TABLE 4.—Average data obtained on 17 varieties tested two to five years at Perkins, Oklahoma, during the period 1944 through 1948.

Variety	Lbs. Lint per acre	Staple in 32's	Lint Percent		Grams per Boll	Pct. Picked* 1st Pick.	Years Tested
			Picked	Pulled			
Empire	324	33	35.5	26.9	6.4	35.0	3
Stoneville 62-48	308	32	36.0	28.0	5.6		3
Hi-Bred	304	27	41.3	32.9	5.8	52.3	5
Stoneville 62-84	300	32	35.9	27.3	5.5	38.4	3
Half and Half	296	29	41.6	33.0	5.8	44.5	2
Stoneville 62-108	294	32	35.6	27.0	5.6		3
CR-1	282	32	37.1	27.9	6.3	32.2	4
Deltapine 15**	263	33	38.9	29.0	4.7	26.5	5**
Lockett 140	263	29	38.6	30.9	5.9	25.1	3
Acala 6566-18 (Okla. Sp.)	259	31	38.1	29.1	5.1	33.9	5
Watson's New Rowden	254	31	34.6	26.0	6.7	26.6	5
Northern Star	252	32	36.0	27.5	6.2	27.8	4
Lankart 57	252	33	36.2	27.6	7.3	10.6	3
Mebane 6801-2-1	247	29	38.5	30.1	6.3	9.4	2
Stoneville 2B	241	33	33.7	25.9	5.7	23.6	5
Delfos 9169	234	34	34.4	26.2	5.6	23.0	4
Watson	212	31	36.9	28.7	7.2	2.1	5

* Data for 1948 only.

** Data for 1944-1946 were for Deltapine 14.

NOTE: Varieties printed in blackface type are recommended for the area represented by this test.

Deltapine 15 was second in lint yield at Lawton, and it compared favorably with *Mebane 140* at Tipton and Chickasha. It was no better than *Lockett 140* at Perkins. *Deltapine 15* is characterized by a larger plant with more branches than *Mebane 140*. Its small bolls are partly responsible for its being unpopular in Western Oklahoma. Although often classed as inch cotton, *Deltapine 15* has a high lint percent, and it cleans well in ginning.

Lankart 57 was tied for high lint yield at Lawton, while at Tipton, Chickasha, and Perkins it was consistently lower than either *Mebane 140* or *Deltapine 15*. Apparently this variety is limited to a narrower range of adaptation than are the other two varieties mentioned. *Lankart 57* fruits over a long period and is slow maturing; therefore it must be planted early in order to utilize the full season. It has excellent fiber, usually $31/32$ inches, that cleans well in ginning. It has a very large boll and is highly storm resistant.

Northern Star was similar to *Lankart 57* in its yield response at the various locations. It is characterized by smaller bolls and longer fiber than *Lankart*.

Watson, a strain of *Mebane*, is a slow fruiting, late maturing, large balled, storm resistant variety. It is similar to *Lankart 57* in many respects. Its fiber is usually $1/32$ shorter than *Lankart*. *Watson* was not outstanding in lint yield at any of the test locations.

Half and Half and *Hi-Bred* have only fair yield records at Tipton and Lawton, but compared very favorably at Chickasha and Perkins. They are moderately close-fruiting varieties characterized by short wiry lint, $26/$ to $28/32$ of an inch, and exceptionally high lint percent. Experience has been that these varieties yield a high grade at the gin but generally produce untenderable lint because of its short staple length.

Stoneville 62 is a variety selected out of *Stoneville 2B* at the Oklahoma Agricultural Experiment Station. *Stoneville 62* strains have been among the highest yielding varieties tested at Perkins. Two strains tested at Chickasha compared favorably with *Deltapine 15* and *Mebane 140*, while at Tipton and Lawton the strains tested were approximately equal to *Half and Half* in lint yield.

Stoneville 62 appears to be better adapted to the central and eastern portion of Oklahoma. It is characterized by a medium close fruiting plant and moderately coarse fiber, usually classed $31/32$ to an inch. Strain numbers carried on *Stoneville 62* in these tests are dropped when the seed go into commercial production.

Stormproof No. 1 and *Macha* are unique in having burs that do not open fully and in having the lint knitted in the bur. Consequently, they are not adapted to picking; but they are of considerable interest as varieties especially adapted to harvesting with a mechanical stripper. Stormproof No. 1 has had a slightly more spreading growth type, slightly longer lint, and higher lint yield than *Macha* in the Oklahoma tests.

A group of *long staple varieties* adapted only to picking were included in some of the tests. Of these, Empire had the best yield record. Other varieties in this group were Delfos 9169, Stoneville 2B, Coker 100 Wilt, Wilds, Ambassador, Bobshaw 1, Paula, Acala 4-42, and Acala 1517 Wilt. Experience to date indicates that the length and fineness of lint of these varieties make them unadapted to harvesting by pulling or stripping.

New Strains

New strains of cotton are included in these tests so they can be compared with the varieties in commercial production. Those developed by the Oklahoma Agricultural Experiment Station which are in limited production are CR-1 and CR-2.

CR-1 is characterized by a prominent central stalk and short lateral branches, resulting in a close fruiting habit. It usually staples 15/16.

CR-2 is a sister selection of CR-1 that has shorter staple, 7/8 to 29/32 of an inch, shorter stalk, more compact boll, and somewhat more storm resistance. Seed of these two varieties will be available in limited quantities for experimental plantings in 1950. Seed from these experimental plantings will not be eligible for certification.